LISTING OF THE CLAIMS:

This listing of claims replaces all prior versions, and listings, of claims in the application:

1: (Original) A system for providing synchronous telephony or POTS services over an asynchronous communications network, comprising:

a gateway coupled to the asynchronous communications network having a first clock for creating a first clock signal and incorporating the first clock signal as a first timestamp in a packetized voice sample, and transmitting the packetized voice sample over the asynchronous communications network;

a terminal interface for receiving the packetized voice sample from the asynchronous communications network and measuring the time of arrival of the packetized voice sample in a second timestamp;

a synchronization module for receiving the packetized voice sample and the second timestamp from the terminal interface and extracting the first timestamp from the packetized voice sample and comparing it to the second timestamp to produce a second clock signal; and

a codec receiving the packetized voice sample and the second clock signal from the synchronization module;

wherein the codec decodes the packetized voice sample using the second clock signal.

2. (Original) The system of claim 1, wherein one or more gateways communicate with one or more terminal interfaces over the asynchronous communications network in accordance with a synchronization protocol.

3. (Original) The system of claim 2, wherein the transmission of packets between the gateways and the terminal interfaces is ordered in accordance with the synchronization protocol.

4. (Original) The system of claim 3, wherein when one or more terminal interfaces attempts to transmit at the same time after the packetized voice sample is sent from the gateway, each terminal interface retains ordering information from collision resolution cycles.

5. (Original) The system of claim 3, wherein the ordering information is used repeatedly for further transmissions in place of collision resolution.

6. (Original) The system of claim 3, wherein the synchronization protocol includes assigning access priorities to and establishing keep-out windows for terminal interfaces coupled to the asynchronous communications network such that the keep-out windows prevent a first terminal interface having a low access priority from transmitting on the asynchronous communications network before the completion of transmission of a packetized voice sample from the gateway to a second terminal interface having a higher access priority.

7. (Original) The system of claim 1, wherein packetized voice samples transmitted over the asynchronous communications network may be delayed by access jitter.

8. (Original) The system of claim 7, wherein the access jitter includes one or more of: basic access delay, collision resolution delay, or priority access delay.

9. (Original) The system of claim 1, wherein the asynchronous communications network implements HPNA technology.

10. (Original) A method for providing synchronous telephony or POTS services over an asynchronous communications network, the method comprising: queuing a first packetized voice sample at a gateway for transmission over the asynchronous communications network;

sampling and storing the value of a first clock at the time at which the first packetized voice sample is queued for transmission to produce a first timestamp;

incorporating the first timestamp into the first packetized voice sample;

transmitting the first packetized voice sample over the asynchronous communications network from the gateway to a terminal device;

measuring and storing the delay between the queuing and transmission of the first packetized voice sample to produce a stored access delay;

queuing a second packetized voice sample at the gateway for transmission over the asynchronous communications network;

incorporating the stored access delay into the second packetized voice sample;

sampling and storing the value of the first clock at the time at which the second packetized voice sample is queued for transmission to produce a second timestamp;

incorporating the second timestamp into the second packetized voice sample;

transmitting the second packetized voice sample over the asynchronous communications network from the gateway to the terminal device;

sampling and storing the value of a second clock at the time at which the second packetized voice sample is received at the terminal device to produce a third timestamp;

extracting the second timestamp and stored access delay from the second packetized voice sample;

subtracting the second timestamp and stored access delay from the third timestamp to produce a clock adjustment value; and

adjusting the phase of the second clock based on the clock adjustment value.

11. (Original) The method of claim 10, wherein one or more gateways communicate with one or more terminal interfaces over the asynchronous communications network in accordance with a synchronization protocol.

12. (Original) The method of claim 11, wherein the transmission of packets between the gateways and the terminal interfaces is ordered in accordance with the synchronization protocol.

13. (Original) The method of claim 12, wherein when one or more terminal interfaces attempts to transmit at the same time after the packetized voice sample is sent from the gateway, each terminal interface retains ordering information from collision resolution cycles.

14. (Original) The method of claim 12, wherein the ordering information is used repeatedly for further transmissions in place of collision resolution.

15. (Original) The method of claim 12, wherein the synchronization protocol includes assigning access priorities to and establishing keep-out windows for terminal interfaces coupled to the asynchronous communications network such that the keep-out windows prevent a first terminal interface having a low access priority from transmitting on the asynchronous

communications network before the completion of transmission of a packetized voice sample from the gateway to a second terminal interface having a higher access priority.

16. (Original) The method of claim 10, wherein the delay between the queuing and transmission of the first packetized voice sample may be caused by access jitter.

17. (Original) The method of claim 16, wherein the access jitter includes one or more of: basic access delay, collision resolution delay, or priority access delay.

18. (Original) The method of claim 10, wherein the asynchronous communications network implements HPNA technology.